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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/711,238

09/03/2004

Jonathan D. Albert

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EXAMINER

LIANG, REGINA

ART UNIT

PAPER NUMBER

2629

MAIL DATE

DELIVERY MODE

10/04/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/711,238

Applicant(s)

ALBERT ET AL.

Examiner

Regina Liang

Art Unit

2629

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 August 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-16, 18 and 20 is/are rejected.
- 7) ☒ Claim(s) 17, 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____.

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claim Rejections - 35 USC § 103

2. Claims 1-4, 10, 12, 16, 18, 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rothschild et al (US. 5,802,015 hereinafter Rothschild) in view of Sato et al (US 5,173,342 hereinafter Sato) and Inoue et al (US 4,922,241 hereinafter Inoue).

As to claim 1, Rothschild discloses an electrically active display comprising: an optoelectrically active display medium (the output device 14 is a TN liquid crystal display, col. 11, line 67), an adhesive layer (18) disposed on the second surface of the display medium, the surface of the adhesive remote from the display medium forming an external surface of the display, so that the display can be attached to a receiving surface by the adhesive (Fig. 2, the bottle 11 is a receiving surface).

Rothschild does not explicitly disclose the display medium comprising an optically transmissive electrode in contact with the first surface of the display medium. However, Sato is cited to teach a conventional TN liquid crystal display device having an optically transmissive electrode (2) in contact with the first surface of the display medium (1) as is well known in the art. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the display medium of Rothschild to comprise an optically transmissive electrode (2) in contact with the first surface of the display medium in order to apply voltages to the electrodes of the display for generating the display image.

Rothschild as modified by Sato does not disclose the optoelectrically active display medium is a bistable display capable of changing its optical state upon application of an electric field thereto. Inoue is cited to teach a display device having a bistable effect with respect to an electric field and allows an arrangement of a display element for maintaining the stable state in order to solve the problems posed by the display elements using a TN liquid crystal (col. 5, lines 13-18). Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Rothschild as modified by Sato to utilize a bistable display medium as taught by Inoue so as to improve the display performance and to provide a display medium including the optical modulation element with a memory function such that a poor display screen state caused by an unstable state of elements located at an area excluding the effective display area can be prevented (col. 5, lines 23-42).

Claims 10 and 20 are product by process claims, the combination of Rothschild, Sato and Inoue teaches the display product as claimed, note the discussion of claim 1 above. Therefore, claims 10 and 20 are obvious over the combination of Rothschild, Sato and Inoue, see M.P.E.P. 2113.

As to 18, note the discussion of claim 1 above. The top electrode 2 of Sato corresponds to the first electrode; the bottom electrode 2 of Sato corresponds to the second electrode. The combination of Rothschild, Sato and Inoue would have the second electrode (2 in Sato) between the display medium and the adhesive layer (18 in Fig. 2 of Rothschild).

As to claims 2, 12, Sato teaches an optically transmissive layer (top substrate 3).

As to claims 3, 4, Sato teaches the electrode 2 comprises a metal oxide or indium tin oxide (col. 2, lines 27-28).

As to claim 16, the bottom electrode 2 of Sato corresponds to the rear electrode. The combination of Rothschild and Sato would have the rear electrode (2 in Sato) between the display medium and the adhesive layer (18 in Fig. 2 of Rothschild).

3. Claims 5, 13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rothschild, Sato and Inoue as applied to claims 1 and 10 above, and further in view of Richley (US 5,900,858).

Rothschild as modified by Sato and Inoue does not disclose the display medium comprising bichromal microspheres. However, Richly teaches a panel display with utilizes a plurality of bichromal ball. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the display device of Rothschild as modified by Sato and Inoue to have the bichromal microspheres display medium as taught by richly so as to provide a flexible display device which has memory capabilities (col. 1, lines 12-17 of Richley).

4. Claims 6, 7, 14, 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rothschild, Sato and Inoue as applied to claims 1 and 10 above, and further in view of Sheridan (US 4,126,854).

Rothschild as modified by Sato and Inoue does not disclose the display medium comprising an encapsulated electrophoretic medium. However, Sheridan teaches a panel display device comprising an encapsulated electrophoretic medium comprising a t least one species of particles dispersed in a fluid medium (col. 2, lines 22-25, col. 3, lines 35-42). Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to

Art Unit: 2629

modify the display panel of Rothschild as modified by Sato and Inoue to have encapsulated electrophoretic display medium as taught by Sheridan so as to provide a flexible display device which has memory capabilities (last two lines in the abstract of Sheridan).

5. Claims 8, 9, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rothschild and Sato as applied to claims 1 and 10 above, and further in view of Brody (US 6,285,343).

As to claim 8 and 11, Rothschild as modified by Sato does not disclose at least one conductive extending from the electrode through the display medium. However, Brody teaches a panel display device having an extending electrode (interconnecting conductor 30 in Figs. 4c, 11) extending from one side of the display to an opposite side of the display with the drive circuit on opposite side of the display. Thus it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the display panel of Rothschild as modified by Sato to have an interconnecting conductor as taught by Brody such that electrically connecting the drive circuit adjacent the second surface with the electrode along the first surface.

As to claim 9, Fig. 4c of Brody teaches at least one contact pad (19) connected to the connecting conductor 30.

Allowable Subject Matter

6. Claims 17 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

7. Applicant's arguments with respect to claims 1-16, 18, 20 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's remarks regarding Rothschild and Sato on pages 8 are not persuasive since the combination of Rothschild, Sato and Inoue teaches the limitation as claimed in claims 1-4, 10, 12, 16, 18, and 20.

Applicant's remarks regarding Sheridan on page 9 are not persuasive. Col. 3, lines 35-42 and Fig. 2A of Sheridan teaches the electrophoretic medium comprising at least one species of particles dispersed in a fluid medium.

Applicant's remarks regarding Brody on page 9 are not persuasive. Figs. 4c and 11 of Brody clearly show the interconnecting conductor 30 extending through the display medium.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

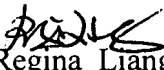
Art Unit: 2629

however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Regina Liang whose telephone number is (571) 272-7693. The examiner can normally be reached on Monday-Friday from 8AM to 5:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Hjerpe, can be reached on (571) 272-7691. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Regina Liang
Primary Examiner
Art Unit 2674

9/28/07